APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,255	02/06/2004	Jukka Reunamaki	088245-0193	6861

23524   7590   11/24/2008

FOLEY & LARDNER LLP
150 EAST GILMAN STREET
P.O. BOX 1497
MADISON, WI 53701-1497

EXAMINER
BARQADLE, YASIN M

ART UNIT	PAPER NUMBER
2456	

MAIL DATE	DELIVERY MODE
11/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Response to Amendment

Applicant's arguments filed on September 18, 2008 have been fully considered but are not deemed persuasive.

- Claims 1 and 6 have been amended.

- New claims 13-17 have been added.

- Claims 1-17 are presented for examination.

Response to Arguments

On pages 6-7 of Applicant's Remarks, Applicant argues that Simons does not teach "transmitting a confirmation packet." Applicant broadly asserts that the cited portions of Simons have any indication that a "confirmation packet" is transmitted.

However, the term "confirmation packet" does not have an explicit definition in the specification that has a limiting effect on the claims. For instance, the instant specification simply states that the device transmits a confirmation packet to the remote wireless device. Therefore, the term "confirmation packet" must be interpreted using the broadest reasonable interpretation. Thus, a "confirmation packet" is interpreted as any packet that serves to confirm any function, request, transaction, etc.

In the instant case, Simon's discloses that in response to the device successfully registering with the beacon, network and device ID's are exchanged. Thus, the registration process involves information being

transmitted from the beacon to the connecting device, the information being a confirmation. Further, the coordinator allocates an identifier to a device when registration occurs, where the identifier is given to the connecting device. Thus, at least one packet is transmitted that servers to confirm that the device has connected. Furthermore Simons teaches "Communication of packets is generally acknowledged (ACK) in ZigBee to confirm reception of a transmitted data packet." (See ¶ 0027).

On page 7, Applicant argues that there is no discussion of "the third predetermined time interval." However, the "time interval" is not limited in the claim, other than with respect to timing and being predetermined. Therefore, the "time interval" only needs to be an interval of time in which the desired action occurs (e.g. the transmitting of the confirmation packet.). Thus, a time interval may be have an arbitrary beginning an end, so long as the beginning an end is somehow predetermined.

In the instant claims, there are three time intervals. Time interval 1 is when the beacon packet is transmitted. Time interval 2 is when the scanning occurs and the joining request packet occurs. Time interval 3 is when the confirmation packet is sent. Thus, time interval 1 can be said to begin when the beacon packet is transmitted and ends right before the scanning occurs. Time interval 2 can be said to begin when the scanning begins and ends right before the confirmation packet is sent. Finally, time interval 3 can be said to

begin when the confirmation packet is sent, and the claim makes no

requirement as to when time interval 3 ends. These time intervals are

predetermined, as the interval begins when a certain action occurs, and ends

before another action occurs.

As currently claimed, the time intervals are not required to be the

deciding factor as to whether an action occurs or does not occur. Rather, a

time interval may be simply defined according to what action is occurring, as

detailed above. Accordingly, the instant claim should be amended to clearly

define how the time intervals are predetermined, what constitutes a time

interval, and how it is determined that a time interval is beginning and ending

in such a way that makes it clear what the relationship between the time

interval and the actions are.

On pages 7-9, Applicant argues that Simons does not teach scanning by

the beacon-transmitting device. However, Simons does disclose that this

occurs. The method as disclosed by Simons is as follows:

A second device scans the piconet for beacons (Simons: Paragraph

[0029]). As the scanning is occurring, that means that the first device must

have sent some signal that declares the presence of the beacon. Thus, the first

device has transmitted some sort of "beacon packet."

A second device requests to join a piconet (Simons: Paragraph [0029]). As this request is received by the first device, the first device is performing a function of scanning for these requests.

Further, the first device receives this joining request packet, which occurs as the first device is scanning for these packets.

Finally, as detailed above, a confirmation packet is sent from the first device to the second device (Simons: Paragraph [0029]).

Accordingly, as no limitations are presented in the instant claim as to what constitutes scanning, the term must given the broadest reasonable interpretation. Thus, scanning, as claimed, is interpreted as being any monitoring or searching for any signal. In this case, the first device of Simons is monitoring or searching for the join request packet, as the first device is aware of when the request is made. Thus, the first device of Simons is performing the scanning function, in as much detail as is required in the instant claim.

On page 9, Applicant argues that Simons does not disclose "the second predetermined time interval." However, this argument is addressed above with respect to the "third predetermined time interval," and will not be repeated here.

Applicant's remaining argument appear to rely on the infallibility of

Applicant's arguments with respect to claim 1. Thus, Applicant's remaining

arguments are non-persuasive for at least the reasons presented with respect

to claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors

Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology

Technical Amendments Act of 2002 do not apply when the reference is a U.S.

patent resulting directly or indirectly from an international application filed

before November 29, 2000. Therefore, the prior art date of the reference is

determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-

AIPA 35 U.S.C. 102(e)).

Claims 1-3, 7-8, and 10-15 are rejected under 35 U.S.C. 102(e) as being

anticipated by Simons USPN. (20060072491).

As per claim 1 and 10, Simons teaches a method of forming a piconet in a wireless communications device (fig. 1 and abstract), the method comprising:

(a) transmitting a beacon packet from the wireless communication device across a wireless channel during a first predetermined time interval (¶ 0012 and ¶ 0037-0039) ;

(b) scanning the wireless channel from the wireless communication device for a second predetermined time interval, the second predetermined time interval immediately following the first predetermined time interval (¶ 0027-0029 and ¶ 0037. See fig. 4);

(c) receiving a piconet joining request packet from a remote wireless communications device during the second predetermined time interval (¶ 0027-0029 and ¶ 0044-0045); and

(d) transmitting a confirmation packet to the remote wireless communications device during a third predetermined time interval, the third predetermined time interval immediately following the second predetermined time interval (¶ 0077-0029 and ¶ 0044-0045 see fig. 4 beacon superfarme).

As per claim 2, Simons teaches the method of claim 1, wherein the piconet joining request includes a request for a role switch (¶ 0026-0032).

As per claim 3, Simons teaches the method of claim 2, further comprising receiving a beacon packet from the remote wireless communications device (¶

0030 and fig. 1).

As per claims 6 and 11, Simons teaches the method in a wireless

communications device (fig. 1 and abstract), comprising:

    (a) transmitting a first beacon packet across a wireless channel during a

first predetermined time interval (¶ 0012 and ¶ 0037-0039) ;

    (b) scanning the wireless channel for a second predetermined time

interval, the second predetermined time interval immediately following the first

predetermined time interval (¶ 0027-0029 and ¶ 0037);

    (c) receiving a request for additional information from a remote wireless

communications device during the second predetermined time interval (¶ 0023,

and ¶ 0027-0029 and ¶ 0031-0035); and

    (d) transmitting the additional information with a second beacon packet

across the wireless channel (¶ 0023, and ¶ 0029 and ¶ 0031-0040)

As per claim 7, Simons teaches the method of claim 6, wherein the additional

information includes available services from the wireless communications

device (¶ 0023, and ¶ 0029 and ¶ 0031-0040) .

As per claim 8, Simons teaches the method of claim 6, wherein the additional

information includes identifiers of devices that are in a piconet with the

wireless communications device ¶ 0031-0035).

As per claim 12, Simons teaches a wireless communications device fig. 1 and abstract, comprising:

means for monitoring a wireless channel for transmissions during a predetermined time interval (¶ 0012-0013; ¶ 0026-0029 and ¶ 0037-0039);

means for receiving a beacon packet from a remote wireless communications device across the wireless channel during the predetermined time interval (¶ 0023, and ¶0027-0029 and ¶ 0031-0035; and

means for, immediately following receipt of the beacon packet, sending a response packet to the remote wireless communications device when the remote wireless communications device is the only device transmitting device during the predetermined time interval (¶ 0026-0029 and ¶ 0047).

Claims 13-15 are rejected with the same rationale as claims 1-3 and 6-12. See the rejection of claims 1-3 and 6-12above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-5, 9 and 16-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Simons in view of Ho USPN. (20040170217).

Regarding claims 4, although Simons shows substantial features of the claimed

invention including using radio frequency channels, Simons does not explicitly

show using one or more OFDM symbols.

Nonetheless, this feature is well known in the art and would have been an

obvious modification of the system disclosed by Simons, as evidenced by HO

USPN. (20040170217).

In analogous art, HO whose invention is about a Wireless personal area

networks with rotation of frequency hopping sequences, disclose (using one or

more OFDM symbols) "In one embodiment, the devices employ orthogonal

frequency division multiplexing (OFDM) modulation to communicate data bits

on each of multiple frequencies during a channel symbol period. Thus, the

OFDM Channel Symbols are at least N sample periods long, where N is the

number of frequency bins used to carry one OFDM symbol data"(¶ 0023).

Giving the teaching of HO, a person of ordinary skill in the art would have

readily recognized the desirability and the advantage of modifying Simons by

employing the OFDM Channel Symbols of HO so that each channel symbol

carries some amount of digital data and to communicate data bits on each of

multiple frequencies during a channel symbol period. In this way persistent

interference is avoided and hence improving network performance.

Regarding claims 5, 9 and 17, Ho teaches wherein the wireless channel

employs a frequency hopping pattern (Abstract and ¶ 0014).

Conclusion

ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the

extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply

is filed within **TWO MONTHS** of the mailing date of this final action and the

advisory action is not mailed until after the end of the **THREE-MONTH**

shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In

no event, however, will the statutory period for reply expire later than **SIX**

MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent

to applicant's disclosure.

Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Yasin Barqadle whose telephone

number is 571-272-3947. The examiner can normally be reached on 9:00 AM

to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yasin M Barqadle/

Primary Examiner, Art Unit 2456